

WHAT IS CLAIMED IS:

1. A stator for an automotive alternator comprising:
a stator core having a plurality of slots; and
a stator coil being a cluster of three phases of connected stator windings
having:

axially parallel portions being those portions which are substantially parallel to the central axis of said stator coil comprising current generating portions being those portions disposed within said slots and generating electric current, and projecting portions projecting from the axial end surfaces of said slots; and

bridge portions being circumferential portions connecting axially parallel portions to each other within each of said three phases of windings;

wherein the inner circumferential surfaces of said bridge portions are placed in contact with said end surfaces of said stator core without any gaps in the direction of the central axis of said stator core so that the spatial ratio occupied by said clusters of stator windings belonging to said bridge portions in coil ends being those portions of said stator coil exposed beyond said end surfaces of said slots is at high density.

2. The stator for an automotive alternator according to Claim 1 wherein said stator core comprises:

a plurality of comb-shaped strips each having a band portion; and

a plurality of teeth disposed substantially parallel to each other extending perpendicularly relative to the longitudinal direction of said band portion,

said plurality of strips being laminated and formed into a cylindrical shape, and

the ends of said teeth being provided with circumferentially projecting portions.

3. The stator for an automotive alternator according to Claim 2 wherein said stator coil is a flat planar shape.

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4. The stator for an automotive alternator according to Claim 1 wherein said stator coil is a flat planar shape.

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5. A method of manufacture for a stator for an automotive alternator comprising:

a step of manufacturing a parallelepiped laminated body having a plurality of slots by laminating a plurality of comb-shaped strips each having a band portion and a plurality of teeth disposed substantially parallel to each other extending perpendicularly relative to said band portion;

a step of inserting into said slots from the side of the openings of said slots a stator coil being a cluster of three phases of connected stator windings comprising:

axially parallel portions being those portions which are substantially parallel to the central axis of said stator coil having current generating portions being those portions disposed within said slots and generating electric current; and

bridge portions being circumferential portions connecting axially parallel portions to each other within each of said three phases of windings;

a step of extending the ends of said teeth of said laminated body in the longitudinal direction of said laminated body; and

a step of bending said laminated body to form a cylindrical shape.

6. The method of manufacture for a stator for an automotive alternator according to Claim 5 further comprising a step of compression molding said bridge portions of said stator coil after said step of inserting said stator coil so that the inner circumferential surfaces of said bridge portions are placed in contact with the end surfaces of said stator core without any gaps in the direction of the central axis of said stator core.

7. The method of manufacture for a stator for an automotive alternator according to Claim 6 wherein said strips are provided with grooves perpendicular to the longitudinal direction of said band portion on said ends of said teeth.

8. The method of manufacture for a stator for an automotive alternator according to Claim 7 wherein said strips are provided with recessed portions on both sides of said teeth.

9. The method of manufacture for a stator for an automotive alternator according to Claim 8 wherein said stator coil is formed into a flat planar shape.

10. The method of manufacture for a stator for an automotive alternator according to Claim 5 wherein said strips are provided with grooves perpendicular to the longitudinal direction of said band portion on said ends of said teeth.

11. The method of manufacture for a stator for an automotive alternator according to Claim 10 wherein said strips are provided with recessed portions on both sides of said teeth.

12. The method of manufacture for a stator for an automotive alternator according to Claim 11 wherein said stator coil is formed into a flat planar shape.

13. The method of manufacture for a stator for an automotive alternator according to Claim 5 wherein said strips are provided with recessed portions on both sides of said teeth.

14. The method of manufacture for a stator for an automotive alternator according to Claim 13 wherein said stator coil is formed into a flat planar shape.

15. The method of manufacture for a stator for an automotive alternator according to Claim 5 wherein said stator coil is formed into a flat planar shape.